

Editor's Note

I invited this paper in response to mounting social pressure for change in patterns of residential care for mentally retarded citizens and in the hope that whatever public policies emerge will be based upon the best available information.

Relationship of Institution Size to Quality of Care: A Review of the Literature

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The existing empirical literature on the relationship of institution size and quality of care was reviewed. Quality of care was discussed along four dimensions: (a) resident-care practices, (b) behavioral functioning, (c) discharge rates, and (d) extent of parental and community involvement. Care has been found to be generally more adequate in smaller institutions. However, considerable variation in quality of care has been reported among small community-based facilities. Little evidence was found that the behavioral functioning of residents is different in institutions of different sizes. There are essentially no data on discharge rates of institutions of different sizes. There is some evidence suggesting that parental and community involvement may be enhanced in community-based facilities.

In recent years, the predominant thrust of social policy concerning institutions for retarded persons has heavily favored small community-based facilities and deemphasized large central institutions. The dissatisfaction with large institutions seems to have come from several sources. One source has been the documentation of dehumanizing conditions in some large central institutions (e.g., Blatt, 1970; Blatt & Kaplan, 1966). Large central institutions were typically built far from population centers, making continued contact with residents by their parents and continued involvement with the community inordinately difficult (e.g., Sarason, Zitnay, & Grossman, 1971). Another impetus for

the current emphasis on small community-based settings has been the widespread acceptance of the concept of normalization: "Utilization of means which are as culturally normative as possible in order to establish and/or maintain personal behaviors and characteristics which are as culturally normative as possible" (Wolfensberger, 1972, p. 28). It would seem that application of the principle of normalization would require residential facilities to be small and located within communities. Finally, the courts have asserted the rights of retarded individuals to include "the right to the least restrictive conditions necessary" (*Wyatt v. Stickney et al.*, 1972).

It has been assumed that, almost by definition, quality of care for retarded individuals is superior in small institutions to that in large central institutions. Unfortunately, there seems to be little empirical basis for this assumption. My purpose in the present paper is to review the existing literature on the relationship between institution size and quality of care for retarded individuals.

For the purposes of the present paper, quality of care will be discussed along

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four dimensions. The first concerns the resident-care practices in institutions for retarded persons, generally, a quality of life dimension. The second concerns the actual behavior of residents in institutions of different sizes. The assumption here would be that more competent behavior on the part of the residents would be an indication of better quality of care. The third dimension concerns release rates. Again, it is assumed that higher release rates are a reflection of better quality of care. The fourth dimension concerns involvement with the residents by parents or other people and residents' involvement with the community. I am taking as given that more involvement with the community is better and that maintenance of contact by parents or others is positive.

Before discussing the actual data, I must mention some interpretive difficulties. In the remainder of the paper, for short-band purposes, the term "size" will be used as if it could act directly upon the residents. This, of course, is not the case. Size is a demographic variable, not a social or psychological one. At best, size may serve as a more or less accurate index of institutional practices or behavioral outcomes. Even if size were found to be associated with quality of care, the question would remain as to what factors actually contributed to the more or less adequate care. The range of possibilities is large. In addition, many persons experienced in the field have observed that there are excellent large institutions and inadequate community-based facilities. The crucial question, then, is whether there are structural aspects of large institutions that, on the average, coerce practices leading to poor quality of care. Complicating the matter still further is the fact that the correlation of institution size and other institutional demographic variables (e.g., cost per patient per day, number of aides per resident, employee turnover rate) has been largely unexplored. In large central institutions and regional centers in Connecticut, large institution size was found to be very strongly related to large living unit size, to higher employee turnover rates, to low cost per resident per day, to a low ratio of aides

to residents, and to a low proportion of professional staff to residents. If this pattern of findings has any generality, even if smaller size were found to be associated with better quality of care, one could not be certain that size was the crucial variable. One could as easily say that the crucial factor was proportion of caretakers to residents, cost, or living-unit size. However, McIntire (1954), in his review of causes of personnel turnover in institutions, did not mention institution size as a determinant. Silverstein (1968) conducted a factor analysis on 13 demographic variables for 130 public institutions for retarded persons and found a factor associated with institution size to be independent of two factors associated with staffing adequacy. However, the range in institution sizes was not specified. Butterfield, Bamett, and Bensberg (1966), in a study of 26 institutions for retarded persons ranging in size from 277 to 2,889 residents, found institution size to be weakly correlated with number of professional staff per resident or employee turnover rate.

Resident-Care Practices

Resident-care practices have often been defined by a scale developed by King, Raynes, and Tizard (1971) in England. This scale contrasts institution-oriented practices at one extreme and resident-oriented practices at the other. For example, then are questions concerning whether or no the residents have personal possessions King et al. (1971) investigated the management practices in three types of institutions: mental deficiency hospitals, ranging in size from 121 to 1,650 residents; voluntary homes, ranging in size from 50 to 9 residents; and group homes, ranging in size from 12 to 41 residents. They found call practices to be more resident-oriented group homes and more institution-oriented in mental deficiency hospitals, with the voluntary homes falling between. However within type of institution, there was little tendency for institution size to be associated with management practices. This finding of some importance when it is recalled that the mental deficiency hospitals ranged

size from approximately 100 to approximately 1,600 residents. The overall conclusion of King et al. (1971) was: "our hypothesis that management practices are not effected by institutional size was confirmed" (p. 194).

McCormick, Balla, and Zigler (1975), utilizing the scale of King et al. (1971), conducted a study of resident-care practices in institutions in the United States and in a Scandinavian country. Large central institutions with populations of over 1,000, medium-sized regional centers with populations ranging in size from approximately 150 to approximately 300, small, regional centers ranging in size from 10 to 116, and group homes ranging in size from 7 to 57 were investigated. Striking differences in care practices were found in living units from different types of institutions, differences that were obtained in both countries investigated. Large central institutions were characterized by the most institutionally-oriented care practices, and group homes by the most resident-oriented care practices, with small and large regional centers between these extremes. However, within institution type, care practices were found to be remarkably homogeneous. This finding was consistent with that of the English investigators.

Blatt and Kaplan (1966) visited and took photographs in five institutions, four that were apparently large central facilities and one that was a regional center of approximately 250 population. Although their data are unconventional, it is impossible not to conclude that the quality of life in the regional center was dramatically better than in the central institutions.

Campbell (1971) conducted a study of the extent of personal independence in individuals living in a mental deficiency hospital and in a group home. Personal independence was defined by such behavior as taking a bath without constant supervision and handling money independently. In that the items in the scale of personal independence seemed to be well within the cognitive capacity of the subjects in the study, the scale is probably best taken as an index of the amount of autonomy the residents were permitted, rather than as the equivalent of a

social maturity or adaptive behavior measure. The group of individuals living in a group home had been transferred from the mental deficiency hospital and were matched on level of retardation, chronological age, verbal IQ, sex, and length of institutionalization with the group remaining in the hospital. Six months after admission to the group home, the group-home subjects showed significantly greater personal independence than subjects in the large institution. However, 1 year later, the large-institution subjects showed significant gains in personal independence while subjects in the group homes did not. Campbell observed that the group-home staff tended to do things for the residents that the residents could do for themselves. Thus, there is a fragment of evidence that resident-care practices in group homes are not inevitably superior to those in larger facilities. Additional evidence on this point has been provided by Edgerton (1975) in a study of family-care homes with six or fewer residents and board and care facilities (group homes) in California. Edgerton stated:

Some board and care facilities are 'open' settings which provide more nearly normalized experiences than large institutions typically do. Most, however, are closed, ghetto-like places, whose residents are walled-off from any access to community life. Such places frequently lack most medical, psychological, and recreational services and their amenities are few indeed. Perhaps more significant still, the residents of such facilities are given to understand, in no uncertain terms, that they can hope for nothing different in the future. . . . The quality of life in the alternative care facilities we have studied is highly variable, with evidence here and there of exciting progress toward the goal of normalization. For most mentally retarded people in this system, however, the little institutions where they now reside appear to be no better than the large ones from which they came, and some are manifestly worse, (pp. 130-131)

O'Connor (1976), in a national survey of group homes, found that facilities housing fewer than 20 residents were more likely to be "normalized" than facilities housing more than 21 residents. A normalized facility was defined by such factors as the absence of security features, existence of personal effects in the area around the residents' beds, and amount of privacy given each resident in bathrooms and bedrooms. Thus, there seems to be considerable varia-

tion in resident-care **practices, even in very small** facilities, differences that may be **related to** size.

In summary, resident-care practices **seem to** be more resident-oriented in **smaller**, community-based facilities than in **large** central institutions. This pattern of **findings** has been obtained in England, in a Scandinavian country, and in one state in **the United States**. I think it is reasonable **to conclude** that the quality of life for retarded **persons is**, on the average, better in small community-based facilities. However, it **seems** equally reasonable to conclude that it is the type of institution, rather than its **size per se**, that is the primary determinant of care practices. In addition, there is some **evidence** that living-unit size, independent of institution size, is related to quality of **care**. McCormick et al. (1975) found small living-unit size to be predictive of resident-oriented care practices in both the **United States and Scandinavia**. Klaber (1969) found living-unit size to be more influential than overall staff ratios in promoting institutional effectiveness. In other words, he suggested that 1 aide for 10 residents would be more effective than 10 aides for 100 residents. Harris and her colleagues (Harris, Veit, Allen, & Chinsky, 1974), in a **study** conducted in one large institution, **found** that a single aide provided a more **nurturant** atmosphere when fewer residents **were on** the ward and suggested that large **wards** should be broken down into smaller **units** each staffed by a single aide. **It is possible** that creating small family-like **living units** in institutions of whatever size **would** create higher quality care.

In addition to the studies of resident-care **practices**, there is a small amount of additional data bearing on the issue of institution size and quality of life. Klaber (1969) **found** less inactivity on the part of residents in a regional center of approximately 300 **population** than in four out of five large **central** institutions. However, tests of **Statistical** significance were not applied, **making** interpretation of the results **difficult**. In two studies (Skinhpj, Mikelsen, Dietrichson, Petersen, Dyggve, & Stene, 1971; Sutnick, London, & Blumberg, 1967), a higher proportion of

hepatitis-associated antigen was **found** among residents in larger institutions than among those in smaller institutions. It is my understanding that the presence of hepatitis-associated antigen indicates that hepatitis was present in the individual at some time.

Behavioral Functioning

Studies of the behavioral functioning of residents in institutions of different sizes are rare, and several of those that have been done are difficult to interpret. This is because the behavior of the residents was assessed on only one occasion. Since it is unlikely that individuals are randomly assigned to institutions of different sizes, any differences found may be due to the fact that the residents differed in crucial respects before they came to the institution. The most adequate research design is a longitudinal one in which changes over time are compared for residents in different institutions. I was able to locate three longitudinal cross-institutional investigations. Balla, Butterfield, and Zigler" (1974) evaluated residents in four institutions ranging in size from approximately 400 to approximately 2,000 residents. There was also considerable variation in cost, number of aides per resident, and employee turnover rate. Residents were examined within 6 months of their admission date, and again after 2.5 years of institutional experience. Measures of mental age (MA), IQ, responsiveness to social reinforcement, verbal dependency, extent of imitation of adults, and behavioral variability were obtained. Contrary to our most pessimistic views concerning the effects of institutions, considerable evidence of psychological growth on the part of the residents was found. Over the course of 2.5 years, in all of the institutions the residents became less verbally dependent, less imitative, and more variable in their behavior. IQ level did not change, and MA level increased. Residents in the largest of the institutions were more responsive to social reinforcement than residents in the other three institutions. With this exception, institution size was not found to be related to the behavior or development of the residents. It seems most

reasonable to conclude that institution size was not an important determinant of behavioral development in the 400 to 2,000 population range.

In a study of IQ and MA change over a 6-year period of time in a regional center and in two central institutions, Klaber (1969) found a greater increase in MA and lesser decrease in IQ in residents in the regional center than in the two central institutions. However, statistical comparisons were not made, again making interpretation of the results difficult.

Tizard (1964) has described a study in which 16 residents were transferred from what appeared to be a mental deficiency hospital to a small experimental unit under the administration of that hospital. These children were matched for sex, age, IQ, and diagnosis with 16 children who remained in the parent hospital. After 2 years, the verbal MAs of the experimental-unit children had increased significantly more than those of the control children. There were no significant differences in changes in nonverbal MA. It might be concluded that smaller living units and, by implication, smaller institutions, promote language growth. However, it must be said that the strong sense of Tizard's paper was that it was the caretaking and educational practices in the experimental unit rather than size that promoted the behavioral growth.

Using cross-sectional rather than longitudinal studies, which, as mentioned above, are less adequate, Klaber and Butterfield (1968) attempted to compare stereotyped rocking of residents in a regional center of approximately 300 population with the incidence of such rocking in four central institutions. However, they did not observe enough stereotyped rocking in the regional center to make comparisons meaningful. Klaber (1969) also compared children in the same regional center and in a central institution on a measure of wariness of strange adults. The children in the regional center were found to be significantly less wary of the adult than were the children in the central institution. Bjaanes and Butler (1974) investigated directly observed behavior, time-use patterns, and characteristics of behavior in two board and care

facilities of 24 and 30 population and two home-care facilities of 4 and 6 population. They found more independent behavior in the board and care facilities than in the home-care facilities. They also concluded that the board and care facilities examined were closer to the objective of normalization than were the home-care facilities. These authors implicated the geographic isolation of the home-care facilities rather than their size as determining their relative ineffectiveness. These findings, of course, could only apply to very small facilities.

Balla, Kossan, and Zigler (Note 1) conducted a study of residents in five regional centers and two central institutions in Connecticut. The regional centers ranged in size from 12 to 290, while the average size of the large central institutions was 1,633. Measures of responsiveness to social reinforcement, wariness of adults, and imitation of adults were obtained. No differences were found between persons residing in central institutions and persons residing in regional centers on any of the behavioral measures. With one exception, no behavioral differences were found between persons residing in the two central institutions and persons residing in the five regional centers. There were also no behavioral differences between persons residing in the largest regional center with a population of 290 and the smallest regional center with a population of 12. It seems most reasonable to conclude that the behavior of the residents in all the institutions was similar. A series of multiple regression analyses was conducted where a number of characteristics of the residents (i.e., MA or length of institutionalization), a number of institutional characteristics (i.e., cost per resident per day, size, or employee turnover rate), and several measures of the preinstitutional life experiences of the residents were used to predict the scores on the behavioral measures. In only one instance was institution size found to be predictive of behavior: the larger the size of the institution, the greater was the motivation of the individuals to receive social reinforcement. It should be noted that a total of 16 variables was significantly predictive of behavior on the three measures.

The most reasonable conclusion from the studies of the behavior of residents from institutions of different sizes is that the similarities are much more striking than the differences.

Discharge Rates

I could find only one fragmentary bit of evidence concerning the issue of discharge rates in institutions of different sizes. In their longitudinal study, Balla et al. (1974) found that the smallest institution discharged fewer residents than the largest institution or another institution with a population of 1,830. There were no other differences among institutions in discharge rates. From these data, one could certainly not conclude that smaller institutions tend not to return the residents to the community. However, it is certainly surprising that there are not more data on release rates of institutions of differing sizes, since this seems to be such an important index of quality of care.

Community and Parental Involvement

A major argument in favor of small community-based facilities has been that parents have easy access to visiting their children and that the residents have greater access to the on-going life of the community. Put another way, a recurring criticism of central institutions is that they are so isolated as to make contact with the outside world difficult. I could find little evidence that if parents lived closer to an institution they would visit their children more often. Klaber (1969) found a statistically nonsignificant relationship between number of visits in a year and distance from parental home. In a study conducted in Vermont, Balla and Zigler (1971) found a very weak relationship between distance from a family's home and frequency of visits received. A similar correlation was found by Burrows, Pasewark, and Gillette (1968) in Wyoming. It would appear that distance from the institution represents a relatively small factor in determining whether a child's parents, family, or friends will maintain contact with him. However, Klaber (1969) found that parents were more likely

to visit children residing in a regional center of approximately 300 population than they were to visit children residing in two central institutions. Campbell (1968) found that individuals residing in a group home were more likely to go to their homes for visits than were individuals residing in a mental deficiency hospital. There was no difference between the groups in the extent to which family members visited the residents at the institutions. In this same study, there was a tendency for individuals in the group home to have more contact with friends other than family than for individuals in the mental deficiency hospital. The only data I could find bearing on the issue of community contact was also contained in the Campbell (1968) study. He found that significantly more residents in the group home than in the mental deficiency hospital were allowed to leave the facility. It was assumed that if the individual were permitted to leave the facility, he would have casual and informal contact with strangers in the course of daily living.

Summary and Conclusion

In summary, it seems that from the studies concerned with what may be called the quality of life dimension, care is more adequate in smaller community-based institutions, especially in those under 100 population. However, there also seems to be considerable variation in quality of life among small community-based facilities. There is very little evidence to suggest that the behavioral functioning of residents is different in institutions of different sizes. There are essentially no data on the issue of whether smaller institutions are more adequate than larger ones in terms of returning their residents to the community. There is minimal evidence to suggest that parental and community involvement may be enhanced in community-based facilities.

However, the number of studies upon which these conclusions are based is small indeed. In addition, the literature reviewed provides almost no indication of an answer to the critical question of whether there are structural aspects of large institutions that tend to coerce practices leading

to poor quality of care. The most appropriate conclusion from this literature review would seem to be that the data base is far too scanty at this time to construct a social policy based on empirical evidence. It has become a cliché to end a report with the statement that more research is needed. In addition, it has been argued that the techniques and data of empirical science are inappropriate to construct social policy concerning institutions for retarded persons. There can be no doubt that there are difficulties. How does one quantify the dehumanization of another person? If complete autonomy to come and go as one pleases is assigned a score of one, what score would be assigned a condition in which a resident is prohibited from leaving an isolation room? If 1 percent of the residents in Institution A were found to have been physically assaulted and 3 percent of the residents in Institution B experienced such treatment, the difference would almost certainly be statistically nonsignificant. I doubt that anyone would conclude that the abuse of an additional 2 percent of the population was of no consequence. While acknowledging such dilemmas, it is my conviction that careful empirical studies will ultimately provide the best avenue for the construction of a social policy that will improve the quality of life for retarded individuals in whatever type of facility they are found. This conclusion is consistent with that voiced by Zigler (Note 2), who stated:

Research takes on added importance at this particularly critical juncture in constructing social policy for the retarded. At the social policy level, the mental retardation field is in a state of flux and disarray. Some years ago, experts convinced decision-makers that special education was the solution to the problem of training the retarded. This view is now suspect and decision-makers are committing themselves to such concepts as normalization and deinstitutionalization. I join with those many senior workers in the field who view these concepts as little more than slogans that are badly in need of an empirical data base. We have little knowledge about what is the best type of classroom or the optimal institutional setting for the retarded, (p. 6)

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